

8. The rotary airlocks are sized according to the mass flow rates predicted from the above.
9. The central mixing chamber is sized for the totals mass flows found above.
10. The screw conveyor from the hopper is determined by the desired production rate.
11. The liquid ring compressor is sized according to the volumetric discharge rate of the vacuum pump.
12. The centrifugal pumps are sized according to the seal water requirements of the vacuum pump and compressor.
13. The recycle tank is selected according to the required production rate.
14. The separators are sized according to the manufacturer's specification for the vacuum pump and compressor.
15. The product recovery cyclone is sized for 98% particle retention over 3 microns.
16. The baghouse (air filter) is selected for the correct air to cloth ratio as recommended by the manufacturer for the fine particles that pass over the product collection cyclone.

CLAIMS

1. That the embodiment of the apparatus in its present form causes more efficient drying of solids by vacuum flashing than convention equipment.
2. That the coaxial and parallel flow venturis prevents the impingement of the solids on the inner surfaces of the pipes and cyclones.
3. The pathogens in the solids are imploded by the high pressures created inside the cyclones due to high rotational speeds.

4. That the ammonia in the air can be recovered in a series arrangement of a liquid ring vacuum pump and compressor.